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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,580	12/30/2005	Nobuo Kimura	145086	1723
25944	7590	08/16/2010	EXAMINER	
OLIFF & BERRIDGE, PLC			KATZ, VERA	
P.O. BOX 320850			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22320-4850			1784	
			NOTIFICATION DATE	DELIVERY MODE
			08/16/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/533,580	Applicant(s) KIMURA ET AL.
	Examiner Vera Katz	Art Unit 1784

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 June 2010.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1, 2, 13-15, 23-29, 43, 44, 54-56, 58 and 65-67 is/are pending in the application.
 - 4a) Of the above claim(s) 54-56, 58 and 65-67 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-2, 13-15, 23-29 and 43-44 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-546)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-2, 13-15, 23-29, 43, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by or in the alternative under 35 U.S.C. 103(a) as obvious over Lortz (2004/0106697)

Considering claims 1-2, 13-15 and 23-29, Lortz teaches an aqueous dispersion of silicon dioxide powder, which is considered to be a dispersoid. The dispersoid has metal oxide bonds; [abstract, 0016]. All of the instant claims 1-2, 13-15 and 23-29 have a plurality of process steps incorporated into the claims after phrases "is obtained by" (claims 1-2, 13, 24, 27 and 28) or "is characterized in" (claims 14-15, 23, 25-26 and 29). These steps do not impact the structure of the end product (dispersoid) as claimed. If there is any difference, the difference would have been minor and obvious.

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. Once the examiner provided a rationale tending to show that the claimed product appears to be the same or similar to that of prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product, see MPEP 2113.

The recitation that the process of making the dispersoid without the presence of an acid, base, and dispersion stabilizer is limited to the process of making the dispersoid and does not negate addition of base, acid, and dispersion stabilizer to the dispersoid after it is made. The limitation of the hydrolyzable groups is not necessarily present in the final dispersoid, but only in the method of making the dispersoid. Additionally, the amount of water is directed to the method of making the dispersoid and is not considered to limit a final dispersoid composition. After making the material, the water content may be adjusted and acids, bases, and additives may be added. The instant claims limit the method of making but do not limit the final dispersoid composition itself. The limitation of temperature is also directed to the method of making the material and not the final dispersoid. Absent a showing otherwise, the

transmittance is expected to be commensurate with the claims given that the method of making the dispersoid is not seen to impact the final structure.

Regarding claims 43 and 44, Lortz further teaches the particle size of the silicon powder is less than 200 nm; [claim 11 and 0036]. This range is regarded to be an average range overlapping that of the instant claims. Additionally, it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness.

2. Claims 1-2, 13-15, 23- 29 are rejected under 35 U.S.C. 102(b) as being anticipated by or in the alternative under 35 U.S.C. 103(a) as obvious over Toki (6235260). Toki teaches a dispersoid, having metal-oxygen bonds, for example, tin or indium oxide. Toki further discloses that dispersoid can be obtained in the absence of a multidentate stabilizer; [col. 4, line 2]. Toki teaches that the use of acid or base is optional; [col. 6, line 60-62 and claim 1 and 2]. Based on the aforesaid, it is considered that the dispersoid can be obtained in the absence of all members selected from acid, base and stabilizer. The limitation of "the absence of all members...,etc" relates to a precursor or an intermediate product for a dispersoid, not the end product, therefore, an addition of the absentees above to the end product-dispersoid is not prohibited. The dispersoid is obtained by mixing a metal compound having at least three hydrolysable groups. The water is added in divided portions to a metal compound, for instance, examples 27 to 42 teach that in the first step the water is added to the mixed separate

solution of water-ethanol; the following step is mixing both metal compound solution and the water-ethanol solution. The temperature is -75 °C, which is below 0°C. This range overlaps that of the instant claim. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention, to select the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness. The water is added in the amount of 0.6 mole/mole, which is within the range of the instant application. The step of admixing takes place at the temperature below 0°C; [col. 12, lines 49-58]. All of the instant claims 1-2, 13-15 and 23-29 have a plurality of process steps incorporated into the claims after phrases "is obtained by" (claims 1-2, 13, 24, 27 and 28) or "is characterized in" (claims 14-15, 23, 25-26 and 29). While these steps are not considered to add structure to the end product (dispersoid) as claimed, Toki teaches similar methods and materials as explained above. Therefore, based on the similarities of materials used, and common steps in the method of making the dispersoid, the property of a transmittance range is expected to be commensurate with the instant claim limitation.

3. Regarding the use of an acid, base, and stabilizer, this limitation is considered to limit the method of making only, and not the final composition. After making the material, acids, bases, and additives may be added. Additionally, Toki teaches that the use of acid or base is optional and a stabilizer is not present; [col. 6, line 60-62 and claim 1 and 2, col. 4, line 2]. Though the working examples employ an acid addition, the acid addition is variable, and in some examples the acid addition is mild and close to neutral with no negative impact on the dispersoid structure as shown; [Table 4,

examples 37 and 38]. Therefore, Toki is taken to disclose that the presence of an acid, base, and stabilizer are optional, therefore including the lack thereof. Alternatively, the person of ordinary skill in the art would appreciate the mild acid addition shown in the examples and their resultant small or zero impact on the dispersoid formed and it would have been obvious to produce the dispersoid in an acid-free environment with a reasonable expectation to success.

Response to Arguments

4. Applicant's arguments filed 06/21/10 in response to the Office Action dated 03/23/10 have been fully considered.
5. In response to the applicant's arguments that the process steps and structural limitations of the precursor materials should be considered when the steps would expect to impact distinctive structural characteristics of the final product, it should be noted that the applicant does not provide any factual evidence to support this conclusion. The applicant is invited to provide supportive evidence showing how the process steps affect the structural characteristics of the final product.
6. The applicant further argues that the Office has not shown the inherency of the property of spectral transmittance. However, as it was shown in the rejection section above, the structure of dispersoid having metal oxide bonds with an overlapping range of average particle size and distribution of Lortz is substantially identical to those of the

instant claims. Absent a showing otherwise, the transmittance is expected to be commensurate with the claims given that the method of making the dispersoid is not seen to impact the final structure. Once the Examiner presents evidence or a reasoning tending to show the inherency, the burden shift to the applicant to show an unobvious difference, see MPEP 2112.

The applicant may wish to provide evidence to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

In response to the applicant's argument that Lortz does not disclose properties of the dispersoid such as high transparency, homogeneity and stability, it is noted that Lortz teaches a stability of dispersion and a great reduction of agglomeration is considered to meet the homogeneity property; [0007-0009, 0033], while the transparency or transmittance is considered to be present as well in the Lortz dispersoid, see response to the argument immediately above. In addition, the disclosure in the instant specification of the properties of specific materials is not commensurate in scope with the broadly claimed subject matter encompassed by instant claims.

As to the applicant's argument that certain features are not appreciated by Lortz, it should be noted that the purpose of the prior art invention may be different.

In response to the applicant's argument that the reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., capability of producing dense and smooth metal oxide films, producing organic-inorganic hybrid materials) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. In view of applicant's amendments and arguments, the applicant traverses the rejection of claims 27-29 under 35 U.S.C. 102(b)/ under 35 U.S.C. 103(a) over Toki (6235260). The applicant states that traversal is for the same reason as Lortz discussed above, therefore, the response to the arguments is the same as that related to Lortz reference above. See also response to the arguments of the previous Office Action, paragraph 8.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Katz whose telephone number is (571)270-7082. The examiner can normally be reached on M - Th 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JENNIFER McNEIL can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vera Katz/
Examiner, Art Unit 1784

/Jennifer C. McNeil/
Supervisory Patent Examiner, Art Unit 1784